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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,034	03/02/2004	William Mark Nichols	NORT 64305	1257
7590 06/23/2005				
Robert P. Lenart Pietragallo, Bosick & Gordon One Oxford Centre, 38th Floor 301 Grant Street Pittsburgh, PA 15219			EXAMINER DESTA, ELIAS	
			ART UNIT 2857	PAPER NUMBER
DATE MAILED: 06/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

4A

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/791,034	NICHOLS ET AL.	
	Examiner	Art Unit	
	Elias Desta	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) 7 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/2/2004</u> | 6) <input type="checkbox"/> Other: _____  |

## Detailed Action

### Drawing

1. The drawing is object to because of the following minor informalities:

➤ Fig. 3:

- Decision blocks 50, 52, 60 and 62 should be diamond shape;
- Block 56 should be labeled as 'Get Next Target/New Target' because the output from block 66 requires finding a 'new target'; and
- After block 64, there is no need to feedback to "Get Next Target"

### Claim rejection – 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8-13 and 15-20 are rejected under 35 U.S.C. 102(b) as anticipated by

Khvilivitzky (U.S. Patent 5,581,250).

In reference to claims 1, 8 and 15: Khvilivitzky teaches a method for the automatic collection of surveillance information by an unmanned air vehicle (see Khvilivitzky, column 1, lines 5-13). The method includes the steps of:

- Receiving an automatic collection requirement message (see Khvilivitzky, column 2, lines 32-35);

- Determining a route for gathering requested information about a target in accordance with a collection policy (see Khvilivitzky, column 4, lines 25-35); and
- Controlling operation of an air vehicle to follow the route and gather the requested information (see Khvilivitzky, column 4, lines 48-65).

With regard to claims 2, 9 and 16: Khvilivitzky further teaches that the automatic collection requirements message includes priority and precedence information (see Khvilivitzky, column 2, lines 56-67).

With regard to claims 3, 10 and 17: Khvilivitzky further teaches that the step of a determining route for gathering requested information includes determining a collection plan and flight plan in accordance with the priority and precedence information (see Khvilivitzky, column 3, lines 45-58).

With regard to claims 4, 11 and 18: Khvilivitzky further inherently includes look angles because the system is implemented using two cameras with an edge contrast principle (see Khvilivitzky, column 4, lines 49-59 and Fig. 5).

With regard to claims 5, 6, 12, 13, 19 and 20: Khvilivitzky further inherently includes that the step of determining route for gathering requested information consists of determining if the target or the receiver is within range; and planning a route to the target or the receiver if the target or the receiver is within range because the collision avoidance the forward-looking TV camera serves for on-course obstacle sensing where a special algorithm is used to identify targets and determine how to change course of action such as planning a different route principally exhibit the same concept (see Khvilivitzky, column 2, lines 29-41).

### Allowable Subject Matter

4. Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### Conclusion

5. Other prior art made of record:

- Netter et al. (IEEE Article, 'A Robotic Aircraft that Follows Terrain Using a Neuromorphic Eye') teaches UAV (Unmanned Aircraft Vehicle) teaches a study of small air vehicles that is capable of flying close to a target and uses motion-sensing visual system to follow terrain and avoid obstacles.
- Wernli (NRAD, 'Trends in UUV Development with the U.S. Navy') teaches case study of various U.S. Navy research development in the area of unmanned undersea vehicles.
- Woodland (U.S. Patent 6,056,237) teaches sonotube compatible, unmanned aerial vehicle and system.
- Guelman et al. (U.S. Patent 5,340,056) teaches active defense system against tactical ballistic missiles.
- Lissaman et al. (U.S. Patent 5,035,382) teaches rapid assembly aircraft for ground surveillance.

Art Unit: 2857

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1750.

Elias Desta  
Examiner  
Art Unit 2857

-ed

June 20, 2005

